

## CLAIMS

What is claimed is:

1. A method comprising:  
  
requesting data to be streamed from a source device to a client device over a network; and  
  
resolving a distributed topology from the request, wherein:  
  
the distributed topology references a plurality of software components that, when executed, fulfill the request; and  
  
at least one of the plurality of software components is executable on each of:  
  
the source device; and  
  
the client device.
2. A method as described in claim 1, wherein the resolving further comprises:  
  
discovering the capabilities of the client device to render a stream of data;  
  
discovering the capabilities of the source device to stream data that is to be rendered; and  
  
deriving the distributed topology from both said capabilities.
3. A method as described in claim 1, wherein the distributed topology is selected from the group consisting of:  
  
a remote sink distributed topology;

a remote source distributed topology; and  
a third party distributed topology.

4. A method as described in claim 1, further comprising building a distributed software infrastructure from the distributed topology, wherein the distributed software infrastructure includes the plurality of software components.

5. A method as described in claim 1, further comprising building a distributed software infrastructure from an optimized distributed topology such that the distributed software infrastructure is configured to stream data from the source device to the client device without rendering the data with the source device before the data is streamed.

6. A method as described in claim 1, wherein:  
the request also requests streaming data from an additional source device to the client device; and  
the resolving resolves the distributed topology such that the plurality of software components, when executed, fulfills the request to stream data from each of the source device and the additional source device, respectively, to the client device.

7. A method as described in claim 1, wherein:  
the request also requests streaming data from the source device to an additional client device; and

the resolving resolves the distributed topology such that the plurality of software components, when executed, fulfills the request to stream data from the source device to each of the client device and the additional client device.

8. A method as described in claim 1, wherein the distributed software infrastructure includes a distributed media session that provides a federated mechanism for control, whereby:

the at least one software component that is executable on the source device is controllable by the distributed media session; and

the at least one software component that is executable on the client device is controllable by the distributed media session.

9. A method as described in claim 1, wherein the resolving is executed without user intervention on a device selected from the group consisting of:

the source device;

the client device; and

a third party device.

10. One or more computer-readable media comprising computer-executable instructions that, when executed, perform the method as recited in claim 1.

11. A method comprising:

receiving a request to stream data from a source device to a client device over a network; and

resolving a distributed topology that references software components to fulfill the request, wherein the distributed topology is resolved from:

capabilities of the client device to render a stream of data; and

capabilities of the source device to stream data that is to be rendered; and

building from the distributed topology a distributed software infrastructure that includes the referenced software components, wherein at least one of the software components is executable on each of:

the source device; and

the client device.

12. A method as described in claim 11, wherein the distributed topology is selected from the group consisting of:

a remote sink distributed topology;

a remote source distributed topology; and

a third party distributed topology.

13. A method as described in claim 11, wherein the resolving further comprises:

discovering the capabilities of the client device to render a stream of data;

discovering the capabilities of the source device to stream data that is to be rendered; and

deriving a distributed topology from both said capabilities, wherein the distributed topology references the software components.

14. A method as described in claim 11, wherein the building further comprises building the distributed software infrastructure from an optimized distributed topology such that the distributed software infrastructure is configured to stream data from the source device to the client device without rendering the data with the source device before the data is streamed..

15. A method as described in claim 11, wherein the distributed topology references a distributed media session that provides a federated mechanism for control such that:

the at least one software component that is executable on the source device is controllable by the distributed media session; and

the at least one software component that is executable on the client device is controllable by the distributed media session.

16. A method as described in claim 11, wherein the receiving and the resolving are executed without user intervention on a device selected from the group consisting of:

the source device;

the client device; and

a third party device.

17. One or more computer-readable media comprising computer-executable instructions that, when executed, perform the method as recited in claim 11.

18. A method comprising:

- discovering the capabilities of a client device to render a stream of data;
- discovering the capabilities of a source device to stream data that is to be rendered; and
- deriving a distributed topology from both said capabilities, wherein:
  - the distributed topology references a plurality of software components to fulfill the request; and
  - at least one of the software components referenced by the distributed topology is executable on each of:
    - the source device; and
    - the client device.

19. A method as described in claim 18, wherein the distributed topology is selected from the group consisting of:

- a remote sink distributed topology;
- a remote source distributed topology; and
- a third party distributed topology.

20. A method as described in claim 18, further comprising building from the distributed topology a distributed software infrastructure that includes said software

components.

21. A method as described in claim 18, wherein:

the discovering of the capabilities of the client device further comprises examining the client device to find a software component which renders a stream of data; and

the discovering of the capabilities of the source device further comprises examining the source device to find a software component which streams data.

22. A method as described in claim 18, wherein the discovering of the capabilities of the client and source devices, respectively, further comprises querying a look-up table that contains:

the capabilities of the client device to render the stream of data; and

the capabilities of the source device to stream data that is to be rendered.

23. A method as described in claim 18, wherein the distributed topology references a distributed media session that provides a federated mechanism for control such that:

the at least one software component that is executable on the source device is controllable by the distributed media session; and

the at least one software component that is executable on the client device is controllable by the distributed media session.

24. A method as described in claim 18, wherein the receiving and the resolving are executed without user intervention on a device selected from the group consisting of:

- the source device;
- the client device; and
- a third party device.

25. One or more computer-readable media comprising computer-executable instructions that, when executed, perform the method as recited in claim 18.

26. A method comprising:

- receiving a request to stream data from a source device to a client device;
- discovering the capabilities of the client device to render a stream of data;
- discovering the capabilities of the source device to stream data that is to be rendered;
- deriving a distributed topology to fulfill the request from both said capabilities, wherein the distributed topology references a plurality of software components;
- building from the distributed topology a distributed software infrastructure, wherein the distributed software infrastructure includes said software components referenced by the distributed topology;
- streaming the data from the source device to the client device over the network;
- and
- rendering the data by the client device.



27. A distributed media session comprising  
a software component having instructions that, when executed, directs acts  
comprising:

resolving a distributed topology that references a plurality of software  
components that, when executed, fulfill a request to stream data from a source  
device to a client device; and

building, from the distributed topology, a distributed software  
infrastructure that includes said software components, wherein at least one of the  
said software components is executable on each of:

the source device; and

the client device.

28. A distributed media session as described in claim 27, wherein the  
resolving further comprises:

discovering the capabilities of the client device to render a stream of data;

discovering the capabilities of the source device to stream data that is to be  
rendered; and

deriving the distributed topology from both said capabilities.

29. A distributed media session as described in claim 27, wherein the  
distributed topology is selected from the group consisting of:

a remote sink distributed topology;

a remote source distributed topology; and

a third party distributed topology.

30. A distributed media session as described in claim 27, wherein the building further comprises supplying at least one additional software component which is referenced by the distributed topology.

31. A distributed media session as described in claim 27, wherein the resolving further comprises optimizing the distributed topology such that the distributed software infrastructure which is built from the distributed topology is configured to stream data from the source device to the client device without rendering the data by the source device before the data is streamed.

32. A computer-readable medium comprising computer-executable instructions that, when executed, direct a computing device to perform acts comprising:

resolving, without user intervention, a distributed topology that references a plurality of software components that, when executed, stream data from a source device to a client device over a network, wherein at least one of the plurality of software components is executable on each of:

the source device; and

the client device.

33. A computer-readable medium as described in claim 32, wherein the

resolving further comprises:

- discovering the capabilities of the client device to render a stream of data;
- discovering the capabilities of the source device to stream data that is to be rendered; and
- deriving the distributed topology from both said capabilities.

34. A computer-readable medium as described in claim 32, wherein the distributed topology is selected from the group consisting of:

- a remote sink distributed topology;
- a remote source distributed topology; and
- a third party distributed topology.

35. A computer-readable medium as described in claim 32, further comprising building a distributed software infrastructure from the distributed topology.

36. A computer-readable medium as described in claim 32, further comprising building a distributed software infrastructure from an optimized distributed topology such that the distributed software infrastructure is configured to stream data from the source device to the client device without rendering the data with the source device before the data is streamed.

37. A computer-readable medium comprising computer-executable instructions that, when executed, direct a computing device to perform acts comprising:

discovering the capabilities of a client device to render a stream of data;  
discovering the capabilities of a source device to stream data that is to be rendered; and  
deriving, without user intervention, a distributed topology from both said capabilities, wherein:  
the distributed topology references a plurality of software components that, when executed, stream data from the source device to the client device; and  
at least one of the plurality of software components referenced by the distributed topology is executable on each of:  
the source device; and  
the client device.

38. A computer-readable medium as described in claim 37, further comprising building from the distributed topology a distributed software infrastructure that includes the plurality of software components.

39. A system comprising:  
a source device that is operable to stream data to be rendered;  
a client device that is operable to render a stream of data; and  
a distributed media session, which when executed, causes actions to be performed including:

resolving a distributed topology that references a plurality of software components that, when executed, stream data from the source device to the client device over a network; and

building from the distributed topology a distributed software infrastructure that includes said software components, wherein at least one of the said software components is executable on each of:

the source device; and

the client device.

40. A system as described in claim 39, wherein the source device is selected from the group consisting of:

a computing device which is locally connected to a source peripheral device; and

a network-ready device that is operable to stream data that is to be rendered.

41. A system as described in claim 39, wherein the client device is selected from the group consisting of:

a computing device which is locally connected to a rendering device; and

a network-ready device suitable for rendering data.

42. A system as described in claim 39, wherein the resolving further comprises:

discovering the capabilities of the client device to render a stream of data;

discovering the capabilities of the source device to stream data that is to be rendered; and

deriving the distributed topology from both said capabilities.

43. A system as described in claim 39, wherein the distributed topology is selected from the group consisting of:

- a remote sink distributed topology;
- a remote source distributed topology; and
- a third party distributed topology.

44. A system as described in claim 39, wherein the building further comprises supplying at least one software component that is referenced by the distributed topology.

45. A system as described in claim 39, wherein the building further comprises building the distributed software infrastructure from an optimized distributed topology such that the distributed software infrastructure is configured to stream data from the source device to the client device without rendering the data with the source device before the data is streamed.

46. A system as described in claim 39, wherein the execution of the distributed media session is performed by one of:

- the source device;
- the client device; and
- a third party device.

47. A system comprising:

a source device which includes a software component that, when executed by the source device, streams data that is to be rendered;

a client device which includes a software component that, when executed by the client device, renders a stream of data; and

a distributed media session, which when executed by either the source device or the client device, provides a federated mechanism for control of:

the software component that, when executed by the source device, streams data that is to be rendered; and

the software component that, when executed by the client device, renders a stream of data.

48. A system as described in claim 47, wherein the source device is selected from the group consisting of:

a computing device which is locally connected to a source peripheral device; and

a network-ready device that is operable to stream data that is to be rendered.

49. A system as described in claim 47, wherein the client device is selected from the group consisting of:

a computing device which is locally connected to a rendering device; and

a network-ready device suitable for rendering data.

50. A system comprising:

a network;

a source device which is configured to:

- compress data; and
- stream the compressed data without rendering the compressed data;

and

a client device, communicatively coupled to the source device over the network,

wherein the client device is configured to:

- receive the streamed data from the source device over the network;
- decompress the received data; and
- render the decompressed data.

51. A system as described in claim 50, wherein the source device is selected from the group consisting of:

- a computing device which is locally connected to a source peripheral device; and
- a network-ready device that is operable to stream data that is to be rendered.

52. A system as described in claim 50, wherein the client device is selected from the group consisting of:

- a computing device which is locally connected to a rendering device; and
- a network-ready device suitable for rendering data.